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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/823,283

04/13/2004

Tremitchell L. Wright

US20030480

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7590

02/25/2009

WHIRLPOOL PATENTS COMPANY - MD 0750
500 RENAISSANCE DRIVE - SUITE 102
ST. JOSEPH, MI 49085

EXAMINER

WILKINS III, HARRY D

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

02/25/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/823,283	Applicant(s) WRIGHT ET AL.	
	Examiner Harry D. Wilkins, III	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4,8,13,14,16-23,26 and 33-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-4,8,13,16-23,26,33,34,37 and 41-49 is/are allowed.
- 6) ☒ Claim(s) 14,35,36 and 38-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 14 January 2009 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 35, 14, 36 and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCallum (US 4,085,028) in view of Price et al (US 2003/0213503).

Art Unit: 1795

McCallum teaches (see abstract, figures and detailed description, particularly example IV) an electrolytic cell device for producing a household bleach solution containing sodium chlorite. The device included an electrolytic cell (58) including a first metallic plate (30), a last metallic plate (31) and a plurality of bipolar intermediate metallic plates (33), each being arranged essentially parallel to each other as claimed, a connection from the first plate to the positive electrode of a source of direct current and a connection from the last plate to the negative electrode of a source of direct current, a conduit (unlabeled pipe leading from part 57 to part 58) connecting to a source of water (50) to deliver water to the electrolytic cell, an inlet (where the conduit enters cell 58) to allow introduction of the water to be decomposed by the cell and an outlet to allow dispensing of product from the cell and a storage space (52) provided to hold a supply of salt (rock salt filled concentrator).

McCallum teaches providing the storage space arranged to receive a supply of a salt composition in solid form located outside the enclosure of the electrolytic cell. However, the specific claim language used is "a storage space provided in said enclosure defining the operative area of the electrochemical cell device downstream of said inlet and upstream of said outlet arranged to receive a supply of a salt composition in solid form to be dissolved by water obtained from the conduit". Thus, the only structural limitation present is the presence of "a storage space... arranged to receive a supply of a salt composition in solid form". The claimed "arranged" feature does not structurally limit the claimed apparatus. See MPEP 2114. It only relates to the intended use of the storage space. Thus, any open space within the enclosure of the electrolytic

Art Unit: 1795

cell which was capable of receiving a supply of a salt composition in solid form would meet this claim limitation. As such, since McCallum shows that there is at least some open space within the enclosure of the electrolytic cell, McCallum teaches this limitation as claimed.

Thus, McCallum fails to teach that the system included an automatic cleaning appliance and a sensing/control system as claimed.

However, McCallum does teach that manual control of the electrolytic cell was known by taking a manual measurement of the sodium hypochlorite concentration downstream of the electrolytic cell and adjusting the settings of the cell as necessary. In general, it has been held that automation of a previous manual activity is obvious to one of ordinary skill in the art absent a showing of unexpected results. See *In re Venner* (120 USPQ 192), *In re Rundell* (9 USPQ 220). Thus, one of ordinary skill in the art would have been motivated to have added an automatic controller for monitoring the concentration of hypochlorite and adjusting the settings of the electrolytic cell accordingly to maintain the concentration within a desired range.

McCallum teaches production of a sodium hypochlorite bleach solution.

Price et al shows an automatic cleaning appliance, such as a dishwasher, which included an electrolytic cell for producing a hypochlorite solution for enhancing the cleaning action of the dishwasher. Such conventional dishwashers included a cleaning cavity into which cleaning chemicals were dispensed.

Therefore, it would have been obvious to one of ordinary skill in the art to have utilized the electrolytic cell of McCallum in combination with the automatic cleaning

Art Unit: 1795

appliance of Price et al because the electrolytic cell device of McCallum was capable of achieving steady, high concentrations of sodium hypochlorite at high efficiencies.

Regarding claim 14, the device of McCallum included a rectified alternating current source as the source of direct current.

Regarding claim 39, the sodium hypochlorite adjusted the pH of the water.

Regarding claim 40, the concentration of sodium hypochlorite in the wash liquor would have been indicative of both the PH and oxidation reduction potential of the wash liquor.

5. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCallum (US 4,085,028) in view of Price et al (US 2003/0213503) as applied above to claim 35 above, and further in view of Bentley (US 6,716,325).

McCallum fails to disclose a back-washing mechanism arranged to remove materials deposited onto said plates during said period of decomposition.

Bentley is relevant because it is directed to an electrolytic cell for generation of hypochlorite. Bentley teaches including a back-washing mechanism arranged to remove materials deposited onto said plates during said period of decomposition (col. 1 lines 41-47). Bentley further notes hypochlorite generators have the tendency to form calcareous and magnesium deposits on the cathode and can become inefficient as a result (col. 1 lines 41-47).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to add a back-washing mechanism of Bentley in the hypochlorite

generator taught by McCallum in order to alleviate the issue of deposits forming on the cathode and thus increasing overall efficiency.

Response to Arguments

6. Applicant's arguments filed 14 January 2009 have been fully considered but they are not persuasive. Applicant has argued that claim 35 as now amended recites a storage device being within the enclosure of the electrolysis cell, whereas McCallum shows the solid salt accepting part being two structures away from the electrolysis cell.

7. In response, Applicant's claim only defines a storage space inside the enclosure of the electrolysis cell, not a storage device. As such, as set forth in the rejection above, the claimed "storage space" provides no further structural limitation beyond being an open space within the enclosure of the electrolysis cell.

Allowable Subject Matter

8. Claim 34 and its dependent claims 2-4, 8, 13, 16-23, 26 and 33 are allowed.

9. Claim 41 and its dependent claims 42-49 are allowed.

10. Claim 37 is allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D. Wilkins, III whose telephone number is 571-272-1251. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1795

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harry D Wilkins, III/
Primary Examiner, Art Unit 1795

hdw